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SOCIO-ECONOMIC DETERMINANTS OF NHIF ENROLLMENT BY SELF-EMPLOYED RESIDENTS OF NYERI CENTRAL SUB-COUNTY, NYERI COUNTY, KENYA

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Abstract: Health care has always been a problem area for many nations, including Kenya, with a large population and a substantial portion living below the poverty line. Out of pocket payment is the predominant means of health care financing in the majority of developing countries including Kenya. The purpose of this study was to investigate National Hospital Insurance Fund (NHIF) enrolment on self-employed residents in Nyeri central sub-county, Nyeri County. The study was guided by four specific objectives: to determine influence of demographic characteristics of self-employed residents on the enrolment of NHIF cover, to establish the relationship between socio-economic status of self-employed residents and enrolment of NHIF cover, to investigate how level of awareness affect NHIF enrolment by self-employed residents and to determine influence of accessibility of health services on NHIF enrolment by self-employed residents.Data was collected from a sample of 306 respondents using questionnaires and thereafter analyzed using SPSS software to generate frequency distributions and measures of central tendency such as mean and standard deviation. The results indicate that more females (28.7%) as compared to male (23.2%) had enrolled to NHIF. Those aged between 36-45 years (17.7%) had enrolled for NHIF. Those who were married (29.7%) were also enrolled. Those who had the size of the household of 3-5 (28.3%) were also enrolled. Education level for those who had gone up to college level (46.8%) were enrolled. Enrollment was also high for people with higher incomes and those who were affiliated to social welfare groups. The awareness of NHIF registration procedures, premium payment mechanisms and the benefit packages was low and this greatly influenced the uptake of the cover. The study concluded that demographic factors (including gender, age, marital status, household size and education level), socio-economic factors, awareness and accessibility had an influence on the enrolment to NHIF for the self employed residents. The study recommends that NHIF increases awareness of benefits by using various media platforms including vernacular stations. Further the study recommends the government to educate people in the informal sector particularly the self-employed to access finance so as increase their level of income to be able to pay for premiums. Further studies should be done on the reasons why self-employed workers register and withdraw.

Key words: *socio-economic determinants, NHIF enrollment, self- employed residents*

1.1 Study background

Provision and financing of affordable, accessible and quality healthcare is one of the key health policy problems currently facing many communities, governments, policy makers and international development institutions. Worldwide 1.3 billion people in developing countries do not have access to adequate and affordable healthcare due to the high cost of using medical services according to World Health Organization (WHO, 2005). Other access barriers include; the high cost of payments for care, long queues, unavailability of health facilities and few health workers. Developing countries are in a difficult situation due to scarcity of resources which have to be shared among many competing priority areas of development with the problem of access being contributed by high population growth rates, HIV/Aids, Tuberculosis and malaria affecting large segments of the population. Other problems include the high maternal and infant mortality rates and the growing burden of non-communicable diseases which places additional strain on the healthcare system. According to United Nations (UN, 2016) Sustainable Development Goal (SDG) no 3 is to ensure healthy lives and promote well-being for all at all ages.

According to Smith *et al* (2010) different parts of the world have different levels of enrolment of health insurance. In the United States of America, Private Health Insurance (PHI) is the major source of health financing and accounts for approximately 35% of total health expenditure, public expenditure accounts for 44.9% while Out of Pocket (OOP) expenditure is at 13.5%.There is a tax based system in the United Kingdom which provides universal health care through the country's National Health Service which covers 86% of overall health expenditure, while PHI accounts for 2.9% and OOP accounts for 2.9% and OOP accounts for 11.1% (Boyle,2011).

Smith *et al* (2010) reported that the Nigerian Government established the National Health Insurance Scheme (NHIS) under the Act 35 of 1999 and aimed at providing easy access to health care for all Nigerians at an affordable cost through various prepayment systems. NHIS is a social security that guarantees the provision of needed health services to persons on the payment of token contributions at regular intervals. The beneficiaries are civil servants in employment, 300,000 pregnant women and children under maternal and child health project.

In a study by Kirigia *et al* (2005) in South Africa, 30% of respondents had at least one person enrolled in a health insurance scheme. According to the World Health Report (2010), Rwandan government has supported creation of over 1000 mutual health insurance schemes and by 2007, 74% of the population had some form of health insurance cover. Under the insurance scheme, premiums are collected by community health workers and transferred to a district level fund and then used to pay for health services.

A study conducted in 2013 by Kenya Household Health Expenditure and Utilization Survey (KHHEUS) found that health insurance is usually associated with the status of wealth in the society. Population in the wealthy quartile reported higher coverage (41.5%) compared to those in the poorest quartile (2.9%). Similarly, the same survey reported wide variation in coverage with the highest coverage being in Kiambu (34.0%), Nyeri (32.9%), Nairobi(31.9%) and Kericho (31.5%) but was lowest among counties with predominantly pastoral communities e.g. Samburu (6.7%),Turkana (3.0%) and Marsabit (1.8%).

With 46% of Kenyans living on less than a dollar per day (Deloitte, 2011), there has been a

reciprocal relationship between poverty and health status. Poverty is a major driver of poor health status while at the same time poor health status drives the poor deeper into poverty. This implies that those who are poor in Kenya face major financial barriers to accessing healthcare not to mention their inability to raise premiums for health insurance. It is therefore on this backdrop of the constraints that render many citizens not to have health insurance that the study investigated the issues surrounding lack of enrolment on self-employed residents in Nyeri central sub-county.

1.2 Statement of the Problem

In Nyeri Central sub-county, there is low enrolment by self-employed residents to NHIF scheme hence many poor and vulnerable households easily resort to risky lifestyles such as self-medication, irrational use of over-the-counter antibiotics or use of unqualified medical practitioners including herbalists (traditional "doctors"). Moreover, there is a general tendency of people who are poor and vulnerable rural households resorting to fundraising or sale of family valuables including limited assets to cater for health care costs whenever disease and sickness attack uninsured families in Nyeri south sub-county. Self-employed workers are continuously exposed to more risks than higher income groups in the society. The exclusion leads to delays in seeking healthcare until it is too late, causing death and suffering especially among the groups who are poor and most vulnerable groups. Health insurance schemes such as NHIF can create an increased availability of affordable healthcare as it enables one to meet the costs of medical expenses. Despite the benefits that are associated with enrolling with NHIF many residents have not embraced this health care programme and therefore, there was need to conduct a study to investigate the socio-economic determinants leading to low enrolment to NHIF scheme in Nyeri central sub- county.

1.3 Research Objectives

The study was guided by the following research objectives

i) To determine influence of demographic characteristics of self-employed residents on the enrolment of NHIF cover.

ii) To establish the relationship between socio-economic status of self-employed residents and enrolment of NHIF cover.

iii) To investigate how level of awareness affect NHIF enrolment by self-employed residents.

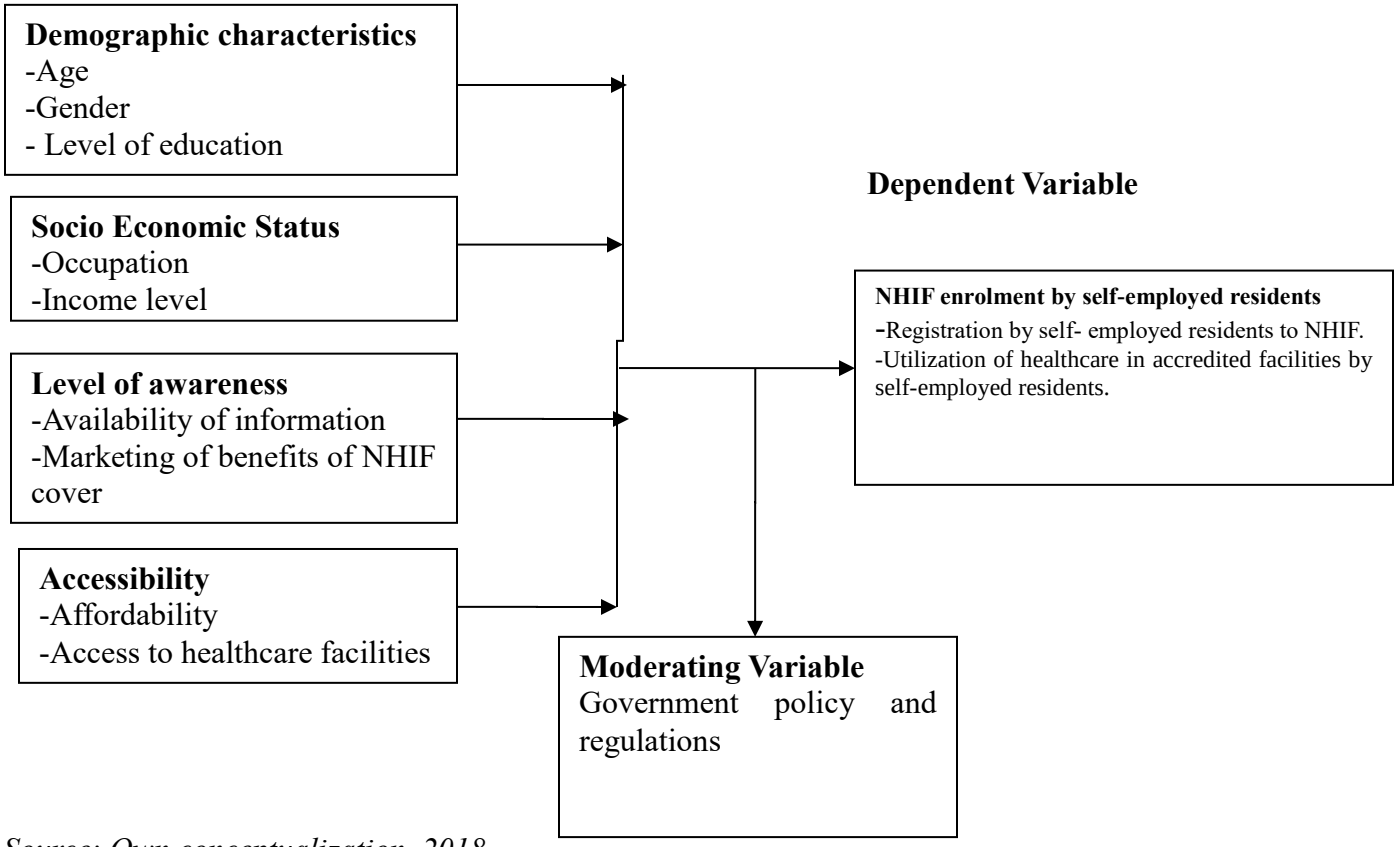
iv) To determine influence of accessibility of health services on NHIF enrolment by self-employed residents.

1.4 Conceptual Framework

The conceptual framework was drawn directly from the research topic

From the Conceptual framework the independent variables are; demographic characteristics, socio-economic status, level of awareness and accessibility. The dependent variable is enrolment of NHIF by self-employed residents.

Figure 1: Conceptual Framework



Source: Own conceptualization, 2018

1.5 Theoretical and Review of Empirical Studies

Theoretical Review

This study is grounded on Nyman's 2001: "Expected Utility Theory" which from a gain perspective is consistent with any purchase in a standard market economy. In this case, the commodity purchased is additional income in a pre-specified state (e.g, when ill), and the utility gain is an expected utility. When consumers purchase any commodity, they give up income that could have been used to purchase other goods and services. In this case, these other goods and services are sometimes given up in one state (illness), and sometimes in another (health). The

applicability of Nyman's theory is best explained by two scenarios. In the first scenario an individual sacrifices part of his disposable income to pay health insurance premiums. In the event of sickness or ill state, the cost of treatment will be taken care of by the health insurance cover, at times the cost being more than the premiums paid, representing a gain. In the second scenario, an individual who does not have a health insurance and therefore does not pay premium, hence more disposable income, will eventually shoulder the burden of the cost of treatment when sickness strikes without a cover to fall back to. The cost of treatment might wipe out all the gains that he had made in terms of non-payment of premiums. The strength of this theory is that it explains the value of health insurance in the anticipated pay off when ill and not because of the certainty it provides. The expectation when they purchase health insurance is that the utility gained from it exceeds its cost in terms of utility foregone from other goods and services that could have been purchased. In this case, insurance is purchased as additional income when in a sick state. The weakness with this theory is that consumers buy insurance in order to receive an uncertain gain in income, the insurance does not present a choice between certainty and uncertainty because there is the uncertainty both with and without insurance.

Review of Empirical Studies

Influence of Demographic Characteristics on enrollment of NHIF

Demographics is defined as statistical data about the characteristics of a population, such as the age, gender and income of the people within the population.In the quest for household catastrophic health expenditure in Georgia, Gotsadze *et al.* (2009) found that households in the richest quartile were less likely to face catastrophic expenditure when compared with the poorest quartile. Wang & Nancy(2012) examined adverse selection in a subsidized voluntary health insurance scheme, the Rural Mutual Health Care (RMHC) scheme, in a poor rural area of China. The total sample included 3492 rural residents from 1020 households. Logistic regression was employed for the data analysis. The results show that although the subsidized scheme achieved a considerable high enrollment rate of 71 percent of rural residents, adverse selection still existed. In general, individuals with worse health status are more likely to enroll in RMHC than individuals with better health status. Furthermore, they found that adverse selection mainly occurs in partially enrolled households. The non-enrolled individuals in partially enrolled households have the best health status, while the enrolled individuals in partially enrolled households have the worst health status.

Gobah and Liang (2011) sought to assess the effect of the Scheme on access to and utilization of healthcare services in the Akatsi District of the Volta region of Ghana. Both qualitative and quantitative data was collected through face-to-face interview with 320 individuals and three service providers using structured questionnaires. The result show that age, level of education, level of awareness and occupation are major determinants of membership of the scheme. The scheme had a positive effect on health seeking behaviour and utilization of health care services by removing significant financial barriers to access.

Kirigia *et al* (2005) examined the relationship between health insurance enrollment and the economic, demographic and educational characteristics among women in South Africa and found

that the proportion of people who had health insurance rose as household income increased with coverage of those earning 1-950 Rand being at 6.3% coverage while those earning above 7600 rand per month having a coverage of 90.75%, implying that intervention at macroeconomic level to boost disposable incomes in South Africa would boost enrollment in health insurance.

Brinda *et al*. (2014) examined the correlation of out-of-pocket and catastrophic health expenditures in Tanzania and established that large household sizes, households with heads involved in manual labour, households with members having a chronic illness and households that visited traditional healers were significantly associated with higher out of pocket health expenditures and catastrophic expenditure. Nevertheless, the study could not explore the impact of the health insurance on alleviating the catastrophe.

While numerous studies have been done in order to establish the relationship between household size and the uptake of health insurance, there seems to be no agreement on the results. Kirigia *et al* (2005), Mhere (2013), and Oraya (2014) revealed that an increase in family size negatively correlated with the probability of enrolling in a health insurance scheme. Kiplagat (2011) differs as his study in Kenya showed that a larger household size as being associated more with social security fund and mutual health insurance schemes like NHIF while smaller households associate more with private health insurance schemes.

Influence of Socio Economic Status on enrollment to NHIF.

Robert and Rebbeca (2005) in their study on enrollment of minorities, part-time workers, and those employed in small firms in the United States found that coverage was influenced by employment status, and size of the employer. Those who were employed were 78.5% likely to be insured compared to 61.7% who were not in the labor force. Those who remained unemployed for over one year, in part-time work and those working in small firms of less than 10 employees were less likely to have health insurance .Furthermore, 20.7% of those who moved from government employment to become self-employed lost their health insurance. The researchers concluded that job loss and movement to small employers were critical factors in explaining loss of health insurance in an economy dominated by employer-sponsored insurance.

In exploring the social economic status and health insurance in Ghana, Sarpong *et al* (2010) used proxy measurements of well-being such as water supply, access to electricity, nature of dwelling to classify households as low, intermediate and high socio-economic status. The findings were: only 21% of poor households were enrolled compared to 60% who were classified as belonging to high socio-economic status. The researchers however acknowledged that the Government of Ghana had recognized the disparities in health Insurance and healthcare and set the subscription fees depending on people's ability to pay

Muiya and Kamau (2013) reviewed approaches used by selected governments towards achieving universal health coverage for their citizenry. Data was generated from a review of existing literature. The study examined available opportunities and challenges faced by the Kenyan government towards enrolling informal sector workers to health insurance. The study revealed that the informal sector does not readily ensure guarantee to financial accessibility to health care by a majority workers. Most informal sector workers are highly vulnerable to economic shocks

that result from catastrophic out-of-pocket health expenditure. The study recommended that though health insurance for informal sector workers increases their access to the services they need and improves financial risk protection, their uptake of health insurance is low. The review established that several countries (German, Singapore, Taiwan, Ghana, and Tanzania) have enrolled informal sector workers to health insurance schemes through increased awarenesss, an approach that can be replicated in Kenya.

Influence on Level of Awareness on enrolment to NHIF

Awareness of benefits of health scheme is an important factor in ensuring enrolment. Sabine (2012) in a study of India's Rasthriya Swashya Bima Johana (RSBY) health insurance scheme reported that male members enrolment was at 60% compared to 40% women. The low enrolment was attributed to the disadvantaged position of women since it was husbands, as heads of households who made decisions in enrollment. The women who had low literacy and lacked information on RSBY continued to rely on their husbands for decisions on enrolment and utilization of their insurance cards.

Results from a study by Sanusi et al., (2009) in Nigeria indicated that 87% of the respondents were aware of the national health insurance and about 83% were registered in the scheme. Factors such as employment level were significantly associated with awareness while gender, income level, family size, marital status and education level were not significant factors influencing awareness of the respondents about the scheme. According to a study done by Macha (2015) in Tanzania using logistic regression education level of the respondents is a significant predictor of a catastrophic expenditure experience. In households whose head had education levels above secondary were about 0.15 less likely to experience catastrophic expenditure. In other words, household with lower education levels were 6.6 times more likely to experience catastrophic expenditure than their counterparts ($p<0.05$).

According to Mahinda's (2013) cross-sectional descriptive study on determinants of self-directed referral of patients at Kenyatta National Hospital (KNH) in Kenya, patterns of patient self-referral at KNH varied according to socioeconomic status, education level and perception of quality of care offered in lower levels of healthcare. Mahinda used chi square test and logistic regression to derive the relationship between the dependent and independent variables, and found that only 27.7% of patients seeking health services at KNH were self-referrals, with 28.6% of ailments being surgical complications. There was no statistically significant association found between individual factors and self-directed referral.

Influence of Accessibility on enrolment to NHIF

Gina and Sapna (2008) emphasize the importance of setting premiums taking into consideration the target populations willingness to pay and the actual cost of the proposed benefit packages and not necessarily on the basis of actuarial calculations as failing to get the right price may lead to future increase in premiums which may in turn lead to decreased in enrollment and distrust among the schemes beneficiaries. Assuming (2013) carried out a study to investigate the extent to which levels of premiums, incomplete information and remoteness of West district in Ghana influenced enrollment into Ghana's Health insurance scheme .The study involved an education campaign on registration procedures, premiums and benefits of insurance. Randomly selected

communities here assigned to receive the equivalent of one third, two thirds or the full cost of the health insurance and after a seven months intervention period, it was found that providing 33% of subsidy of premiums doubled enrollment, showing that demand for insurance is price elastic. Providing convenience in enrollment by registering communities near their areas of residence did not have effect on uptake, suggesting that most important consideration for the people was the level of premiums.

Sikhosana (2005) stated that government policy is a key determinant of health insurance uptake. He notes that in 2001 Mozambique, Zambia, Tanzania, South Africa and Zimbabwe had developed proposals to introduce compulsory health insurance schemes. Thus where participation is a matter of policy, then it is normal that the level of participation is higher compared to situations in which there is no compulsory government policy regarding health insurance schemes.

Muli (2013) sought to establish the determinants of voluntary social health insurance uptake in the public transport industry with reference to Matatu Saccos in Nairobi. The study adopted a descriptive research design. A sample population of 384 drivers and conductors was used in this study. gathered from the interview guides was large and could be time consuming if not well planned. A factor analysis was used to pick the factors with the highest weight. In addition the study used Karl Pearson's product moment correlation analysis to assess the relationship between the variables. The study concluded that the level of income has the highest effect on voluntary social health insurance uptake in the public transport industry, followed by premiums payable, then corporate image while level of awareness had the lowest effect on the voluntary social health insurance uptake in the public transport industry.

1.6 Materials and Methods

The research adopted a descriptive research design. According to Mugenda and Mugenda (2013), a descriptive design allows the researcher to describe record, analyze and report conditions that exist without manipulation of variables. It involves collecting original data (often in the form of a questionnaire) for the purposes of describing a population which is too large to observe directly. The reason for choosing descriptive research design was to help describe the state of affairs with regard to NHIF enrolment of self-employed residents in Nyeri central sub-county.

Nyeri County is home to 845,863 people (male-49% and female-51%), according to the projections by KNBS, 2018. Majority of the people living in Nyeri County are Kikuyus most of whom are predominantly farmers growing tea and coffee as cash crops alongside food crops such as maize, beans, assorted vegetables and sweet potatoes. There are 5 sub-counties in the county namely: Kieni, Mathira, Nyeri Central, Mukurweini, Othaya and Tetu.Nyeri Central projected population by Kenya National Bureau of Statistics by 2018 is expected to be 145,465.The sample size was 306 respondents. This figure was picked from the sampling table by Krejcie& Morgan (1970). To achieve the objectives of the research, the researcher used convenience sampling technique whereby the respondents were the people the researcher would meet accidentally such as *boda bodas* or people who were running their businesses at the time of doing this research.

Validity and Reliability

According to Mugenda and Mugenda (2013), validity is the degree to which results obtained from the analyses actually represent the phenomenon under study. The research instrument was validated in terms of content and face validity. The content related technique measured the degree to which the questions items reflected the specific areas covered.

Reliability is the degree to which a research instrument yields consistent results or data after repeated trials. If a researcher administers a test to a subject twice and gets the same score on the second administration as the first test, then there is reliability of the instrument (Mugenda and Mugenda, 2013).The researcher measured the reliability of the questionnaire to determine its consistency in testing what they are intended to measure. The test re-test technique was used to estimate the reliability of the instruments. This involved administering the same test twice to the same group of respondents who have been identified for this purpose.

1.7 Results and Discussions

Gender of the respondents

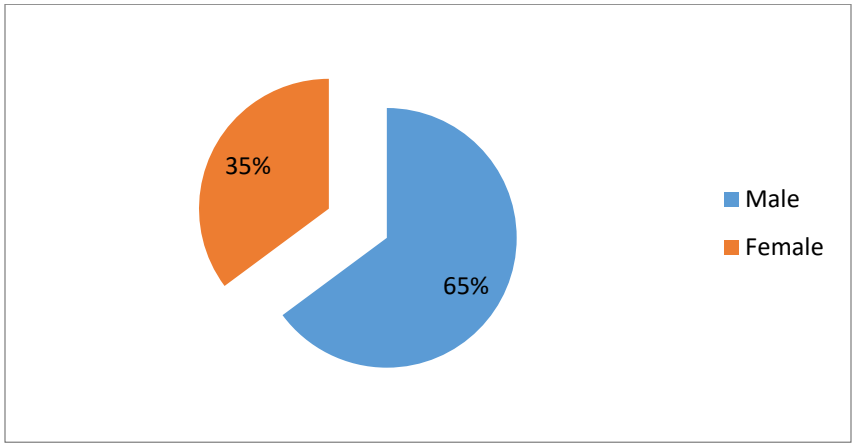
It was necessary to get information on the gender of the respondents so as to establish the percentage of each gender and therefore be able to make an inference from the information collected and the results are indicated in table 1

Table 1: Distribution of respondents by Gender

Gender	Frequency	Percent
Male	190	64.8
Female	103	35.2
Total	293	100

Source: Survey Data (2018)

Figure 2: Gender of the respondents



Source: Survey Data (2018)

The findings as indicated in table 4.1 clearly indicated that 64.8% of the respondents were male

while the rest 35.2% were female. This was a clear indication that male respondents engaged more in self employment compared to their female counterparts.

Highest level of education

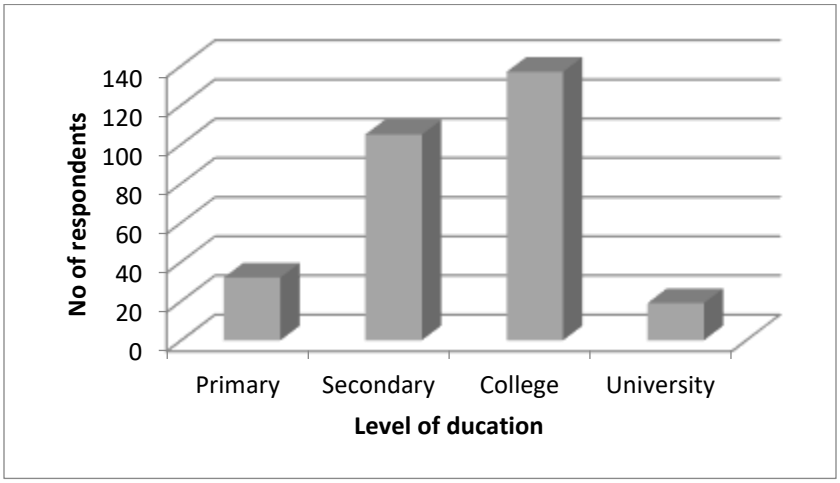
The respondents were asked to state their highest level of education and the responses are indicated in table 2.

Table 2: Distribution of respondents in terms of highest level of education

Highest level of education	Frequency	Percent
Primary	32	10.9
Secondary	105	35.8
College	137	46.8
University	19	6.5
Total	293	100

Source: Survey Data (2018)

Figure 3: Distribution of respondents by highest level of education



Source: Survey Data (2018)

The study findings from table 2 indicates that majority of the respondents had their level of education being at college level at 46.8%, those who had gone up to secondary were 35.8%, those up to primary level were 10.9 while the rest 6.5 % had gone up to university level. This is in agreement with previous studies by Osei-Akoto & Adamba (2011) which showed that the highly educated were more likely to purchase health insurance than the lowly educated due to a positive relationship between a person's education level and ability to acquire skills, stock of knowledge, higher earnings and a positive attitude of avoiding the risk of catastrophic medical expenditure.

Socio-Economic Factors

The study assessed the influence of income level with respect to NHIF enrolment. Cross-tabulation was performed between the respondent's income level and NHIF enrolment.

Table 3: Income level with respect to NHIF enrolment.

Income in Ksh	Frequency	Percent
Below ksh 3,000	57	19.5
3,001-5,000	99	33.8
5,001-8,000	46	15.7
8,001-11,000	32	10.9
11,001 -14000	25	8.5
14001-17,000	18	6.1
17001-20,000	14	4.8
Above 20,000	2	0.7
Total	293	100

Source: Survey Data (2018)

The study findings indicate that majority of the respondents at 10.2% were earning in the range of Ksh 8001-11000 and had enrolled for NHIF scheme. Those earning Ksh 5001-8,000 were 9.5% while those earning Ksh 3001-5000 were 8.9%. Those earning Ksh 14001-17000 were 5.5% and those earning Ksh 11001-14000 were 4.8%. Those earning Ksh 17001-20,000 were 0.3% while the rest were those earning above Ksh 20,000 at 0.3%. This clearly demonstrates that the level of income had an effect on NHIF enrolment. This is supported byBhat and Jain (2006) who in their study in India, analyzed the demand for private health insurance among lower and middle income groups and found that households with Insurance had higher incomes than those which were not insured. In addition, households reporting higher healthcare expenditures as a percentage of total household expenditure had a higher probability of purchasing health insurance. However they also observed that the level of income and health insurance relationship was non-linear, in that as income increased, health insurance increased but after a certain point, the relationship between income and health insurance became negative, indicating that as incomes increased, households allocated their resources to other uses, purchased less health insurance, and were willing to retain the health risks.

Level of Awareness

Table 4: Awareness of NHIF scheme

	Aware		Not aware	
Statement	f	%	f	%
a) All Kenyans over 18 years can join NHIF scheme	136	46.4	157	53.6
b) NHIF covers contributors one spouses and all children under 18years	112	38.2	181	61.8
c) All contributors are issued with aphoto card	141	48.1	152	51.9
d) One can register at any NHIF office	145	49.5	148	50.5
e) Self employed contributors pay 500 per month	102	34.8	191	65.2
f) Contributors are paid through m-pesa, NBK, Co-op and National bank	97	33.1	196	66.9
g) NHIF card covers admissions in registered hospitals only	105	35.8	188	64.2
h) Contributions are not refundable when one withdraws	74	25.3	219	74.7

Source: Survey Data(2018)

Table 4.shows that, the level of awareness of registration procedures (statements a-d), level of premiums, premium payment mechanism (statements e-f) and benefit packages (statements g-h) is below 50%. This clearly shows that the results on awareness of specific statements on NHIF clearly show that they had insufficient information on how to register, how to pay premiums and how they were to benefit if they enrolled. This is supported by Platteau and Ontiveros (2013) to understand the factors underlying low uptake and renewal rates of health insurance in Maharashtra State in who in an attempt India conducted a study understanding of insurance concepts and the level of information that people had on insurance. The findings of the study where: low enrolment and renewal was influenced by deficient information on the functioning of the scheme and poor understanding of insurance concept with most respondents citing lack of information on how to use the insurance.

ACCESSIBILITY

This was to be investigated by asking the respondents to state to what extent they agreed with the statements regarding access to NHIF scheme.

Table 5: Access to NHIF scheme

Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
Distance to NHIF outlet affects enrolment to NHIF scheme.	4	9	19	137	124
Number of NHIF outlets affects enrolment to NHIF scheme.	2	6	31	167	87
Mobile mode of payment affects enrolment to NHIF scheme.	9	15	19	130	120
Amount of premium influences enrolment to NHIF scheme.	32	57	7	121	76
Frequency of contribution (monthly or annually) influences enrolment to NHIF scheme.	27	32	23	111	100
Transaction cost influences enrolment to NHIF scheme.	25	38	16	129	85
Mean	16.5	26.2	19.2	132.5	98.7
Standard deviation	13.0	19.8	7.9	19.1	19.7

Source: Survey Data (2018)

The result findings indicate that majority of the respondents agreed with the statements as concerns access to NHIF with a mean of 132.5 and standard deviation of 19.1.This shows that accessibility in terms of distance to NHIF office, number of NHIF outlets, mode of payment, amount of premium, frequency of contribution and transactional cost influenced enrolment to NHIF scheme. This concurs with Logan and William (2002) who stated that the factors considered in determining premiums in health insurance schemes include: expected cost of benefit packages, administrative cost, expected utilization, market prices and affordability of the premiums to the consumers.

1.8 Conclusion

Age was one of the demographic factors that determined NHIF enrolment. The study found out that the respondents in the age category of between 36-45 years had the highest enrolment to NHIF scheme as compared to the rest. This is best explained by the fact that as one advances in age he or she should be encouraged to enroll to the NHIF scheme. This will go a long way in ensuring that they are covered in terms of their wellbeing because they are more prone to health problems. This is also supported by a study on uptake of health insurance among women in Ghana by Edward (2009) who stated that women aged over 40 years were found to be more likely to enroll to compared to those in lower age ranges, the reason being that as people advanced in age their health stock depreciates at an increasing rate thus inducing increased investment in health which may include health insurance.

As concerns the income the study did establish that majority at 10.2% of the respondents with

the income level of Ksh 8001-11000 had enrolled for NHIF scheme. This is on the basis that the higher the disposable income the more one can afford to pay for premiums and vice versa. Disposable income plays a major role in ensuring that one caters for basic needs such as food, clothing, shelter and health. Having regular income for the self employed will ultimately ensure that they can pay for premiums to NHIF scheme. This is supported by WHO (2010) who stated that approximately 1.3 billion poor worldwide don't have health services accessible since because they are not able to pay at the time of need which leads to those who have to use the services to suffer financial hardship since they have to pay for the health services.

From the study results the level of awareness on registration procedures, level of premiums and premium payment mechanism and benefit packages was below 50%. This clearly shows that the results on awareness on NHIF showed that the respondents had insufficient information on how to register, how to pay premiums and how they were to benefit if they enrolled. Awareness on registration and the benefits arising are crucial in ensuring uptake of health insurance. Making this information available will go a long way in marketing this scheme which will ultimately lead to more enrolment. This concurs with a study done by Khan and Ahmed (2013), who investigated the effect of educating on health insurance using discussion of weekly groups on health expenditure and health insurance and found that the Willingness To Pay (WTP) for health insurance after the awareness period was 33.8 percent higher among the workers in the informal sector who participated in the awareness campaigns compared to those who had not participated in the awareness session.

The study results indicate that majority of the respondents agreed with statements concerning the distance to NHIF centers, number of NHIF offices, premium amount, frequency contributions and transactional costs involved with a mean of 132.5 and standard deviation of 19.1 which implies that accessibility was a determinant on enrolment to NHIF scheme. Accessibility to NHIF scheme is an important element in ensuring the self employed residents are able to get the health services. NHIF should ensure that their processes in terms of processing claims is fast and efficient. Whenever one wants to make payment or enquiry it should be affordable and convenient. This is supported by Delloite (2011) who stated in the National Social Health Insurance Strategy Report, the mechanisms to increase accessibility to collection points for premiums to include collection by various organizations that are close to the population which include; cooperative societies, welfare organizations, trade associations and churches as they may collect the contributions more effectively than NHIF branch offices.

1.9 Recommendations

The National Hospital Insurance Fund (NHIF) needs to improve in the following areas: There is need to increase the level of awareness on the registration process, premium payment and the benefits associated with NHIF which from the findings was below 50%. This can be done by using various media platforms to improve the rate of uptake of NHIF such as use of vernacular stations which would come in handy in delivering simple and clear messages that can be understood by majority of the rural population, irrespective of their education level and their economic status. Also the network of offices especially in the rural areas should be increased to enable residents' access vital information, registration and premium payments. This can help in ensuring the NHIF services are accessible since from the findings distance to NHIF offices was a

major hindrance to NHIF registration by self-employed residents. It is also important to explore the viability of simple online platforms to enable persons residing in areas far from NHIF offices register and pay premiums without having to visit NHIF offices. Finally, given that affordability of the premiums has been cited as a major challenge from the research findings due to little income the self-employed residents get, the institution should consider allowing self-employed workers pay their premiums in small installments rather than insisting monthly, quarterly, semi-annual and annual payments.

References

Brinda, E.M., Andrés, R.A. and Enemark, U. (2014). "The correlates of out-of-pocket and catastrophic health expenditures in Tanzania: results from a national household survey," *BMC International Health and Human Rights* 2014, 14:5.

Gina, L. and Sapna, S. K. (2008).*Overcoming the challenges of scaling Voluntary risk pools in Low-income settings*. Results for Development Institute.Technical Paper No.6.

Gotsadze, G., Zoidze, A. and Rukhadze, N. (2009)."*Household catastrophic health expenditure: evidence from Georgia and its policy implications*," BMC Health Services Research 2009, 9:69.

Khan and Ahmed (2013).*The impact of educational intervention on willingness to pay for Health Insurance*: A case study of informal sector workers in Bangladesh. Health economics review2013, 3:12.

Kiplagat J. I., (2011*). Determinants of Health Insurance Choice in Kenya*. A Research Paper Submitted to the School of Economics, University of Nairobi for the Award of a Masters of Art Degree in Economic Policy and Management

Kirigia, J. M., Sambo, L. G., Nganda, B., Mwabu, G. M., Chatora, R., &Mwase, T. (2005). *Determinants of Health Insurance Ownership among South African women*.BMC Health Services Research, 5(1), 1.

Macha R.R (2015). Community Based Health Insurance Schemes and Protection of the Rural Poor: Empirical Evidence from Tanzania. *African Journal of Economic Review, Volume III,Issue 2,*

Mhere Francis (2013).Health Insurance determinants in Zimbambwe: A case of Gweru Urban. *Journal of Applied Business and Economics* Vol.14(2) 2013.

Mugenda, O.N and Mugenda, A.G. (2013).Research Methods: *A Quantitave and Qualitative Approach* .Nairobi: ACTS press.

Muiya, B. & Kamau, A. (2013).Universal health care in Kenya: Opportunities and challenges for the informal sector workers, International Journal of Education and Research, 1 (11):52 64

Muli, J. (2013).Determinants of Voluntary National Hospital Insurance Fund (NHIF) Uptake in the Public Transport Industry: A Case of MatatuSaccos in Nairobi, (Unpublished Thesis). University of Nairobi: Kenya.

Muli, J. (2013).Determinants of Voluntary National Hospital Insurance Fund (NHIF) Uptake in the Public Transport Industry: A Case of MatatuSaccos in Nairobi, (Unpublished Thesis). University of Nairobi: Kenya.

Oraya, J. A. (2014). *Determinants of Health Insurance Demand among the Migrants in Kenya.* (Masters Dissertation, University of Nairobi).

Osei-Akoto, I.&Adamba. (2011).Ethnic and Religious Diversity as Determinants of Health

Insurance Uptake in Ghana. Institute of Statistical, Social and Economic Research, University of Ghana,Legon Accra.

Robert W F and Rebecca A.L (2005).*The dynamics of health Insurance Coverage*: Factors correlated with insurance gain and loss among adults.

Sabine Cerceau (2012) Gender Equality in Access to Healthcare: *The role of social health protection*. A case study of RSBY scheme.Giz Discussion Papers.on Social Protection.

Sanusi, R.A., & Awe, A.T.(2012*). An assessment of awareness level of National Health Insurance Scheme (NHIS) Among Health Care Consumers in Oyo State, Nigeria.* Management in Health, Vol 16, No 1.

Sarpong N, Loag W, Fobil J, Meyer C G,Adu-Arkodie Y ,May J, Schwarz G(2010).National Health Insurance Coverage and Socio-economic.Status in a rural district of Ghana. *Journal ofTropical Medicine and International Health* ,2010 Vol.15.No 2 PP.191-197.

Smith, A., Chamberlain, D., Hawan, S., Narb, S., &Chelwa, G.(2010). *Kenya Micro insurance Landscape: Market and Regulation*.The Centre for Financial Regulation and Inclusion.

Wang. H and Nancy P. (2012) Community–Based Health Insurance; A revolutionary Approach to achieving universal coverage in low- income Countries .*Journal of life sciences* 320-329.

WHO (2005).*Sustainable health financing, Universal Health Coverage and Social Health Insurance* .Retrieved from www.who.org on 10/04/2018

Platteau .J.P.and Ontiveros D .U.(2013) Understanding and Information Failures*: Lessons From a Micro insurance Program in India*. Research Paper No.29.Micro insurance Innovation Facility. ILO, Geneva